

Sub 17 directing more of the liquid from an outlet which is off-center from a central axis of the substrate normal to the surface, at an angle so that the liquid flows rotationally over the surface about the central axis, the material depositing on the surface.

B1 2. (Twice Amended) A method of applying a material as in claim 1, further comprising:

pressing the substrate against the enclosure to form a seal.

3. (Twice Amended) A method of applying a material as in claim 1, further comprising:

coupling a cathode contact to the substrate surface,
wherein the material plates onto the surface.

4. (Twice Amended) A method of applying a material as in claim 3, further comprising:

forming a metallic film on the substrate surface.

5. (Amended) A method of applying a material as in claim 4, wherein the metallic film includes copper.

Sub 27 18. (Twice Amended) A method of electroplating a material onto a substrate surface within an enclosed chamber, comprising:

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securing a substrate within an opening in a chamber so that a surface of the substrate faces an interior of the chamber;
coupling a cathode to the substrate;
introducing an electrochemical liquid into the chamber through an outlet which is off-center from a central axis of the substrate normal to the surface, at an angle so that the liquid flows rotationally over the surface about the central axis, material plating out of the liquid onto the surface.

19. (Twice Amended) A method of electroplating a material as in claim 18, wherein introducing a liquid further includes spraying the liquid out of a plurality of spray outlets at least two of the outlets contributing to said rotational flow about the axis over the surface.

21. (Twice Amended) A method of electroplating a material as in claim 19, wherein the spray outlets are angled at approximately 20 to 60 degrees relative to the surface.

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22. (Amended) A method of electroplating a material as in claim 21, wherein said liquid is directed radially outward with respect to the axis.

23. (Amended) A method of electroplating a material as in claim 22, wherein said liquid has a circumferential component and a radial component relative to the axis.

24. A method of electroplating a material as in claim 19, wherein at least one of the plurality of spray outlets is pointed in a perpendicular direction toward the center of the substrate surface.

25. A method of electroplating a material as in claim 24, wherein said plurality of spray outlets includes at least four spray outlets forming a cross pattern.

26. A method of electroplating a material as in claim 25, wherein said plurality of spray outlets further includes at least one spray outlet located at the center of the cross pattern.

27. (Amended) A method of applying a material onto a substrate surface as in claim 1, wherein introducing the liquid further includes spraying the liquids out of a plurality of spray outlets at least two of the outlets contributing to said rotational flow about the axis over the surface.

28. (Amended) A method of applying a material onto a substrate surface as in claim 27, wherein the two spray outlets are angled at approximately 20 to 60 degrees from the surface.

29. (Amended) A method of applying a material onto a substrate surface as in claim 1, wherein the liquid is directed radially outward with respect to the center of the substrate surface.

B4 30. (Amended) A method of applying material onto a substrate surface as in claim 1, wherein the liquid has a circumferential component and a radial component relative to the axis.

31. (Amended) A method of applying a material onto a substrate surface as in claim 27, wherein at least one of the plurality of spray outlets is pointed in a perpendicular direction toward the center of the substrate surface.

32. (Amended) A method of applying a material onto a substrate surface as in claim 27, wherein the plurality of spray outlets includes at least four spray outlets forming a cross pattern.

33. (Amended) A method of applying a material onto a substrate surface as in claim 27, wherein the plurality of spray outlets further includes at least one spray outlet located at the center of the cross pattern.